

CLAIMS

What is claimed is:

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Sub A1
1. A method of treating a respiratory distress syndrome in a mammal, comprising administering a therapeutically effect amount of an agent that activates surfactant secretion in said mammal.
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2. The method of **Claim 1**, wherein said therapeutic agent is at least one intracellular calcium chelator.
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3. The method of **Claim 2**, wherein said intracellular calcium chelator is BAPTA-AM.
4. The method of **Claim 3**, wherein BAPTA-AM is between 25 and 100 μM .
5. The method of **Claim 1**, wherein said agent comprises inducing an enhanced secretion of surfactant from type II pneumocytes.
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6. The method of **Claim 1**, wherein said agent acts by altering an endoplasmic reticulum free calcium concentration ($[\text{Ca}^{+2}]_i$) in type II pneumocytes.
7. The method of **Claim 1**, wherein said agent is administered by an aerosol, nebulization or liquid instillation.
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8. A method of inhibiting a respiratory distress syndrome in a mammal, comprising administering a therapeutically effect amount of an agent that activates surfactant secretion in said mammal.
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9. The method of **Claim 8**, wherein said agent comprises at least one intracellular calcium chelator.

Sub 04 10. The method of **Claim 9**, wherein said intracellular calcium chelator is BAPTA-AM.

5 11. The method of **Claim 10**, wherein BAPTA-AM is between 25 and 100 μM .

Sub 05 12. The method of **Claim 8**, wherein said agent comprises inducing an enhanced secretion of surfactant from type II pneumocytes.

10 13. The method of **Claim 12**, wherein said agent acts by altering an endoplasmic reticulum free calcium concentration ($[\text{Ca}^{+2}]_i$) in type II pneumocytes.

15 14. The method of **Claim 8**, wherein said agent is administered by an aerosol, nebulization or liquid instillation.